

MONTROSE PARK TULIP POPLAR  
(Montrose Park *Liriodendron tulipifera*)  
NPS Witness Tree Protection Program  
Rock Creek Park  
Montrose Park  
Clearing in northwest corner  
Washington  
District of Columbia

HALS DC-10  
DC-10

PHOTOGRAPHS

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WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN LANDSCAPES SURVEY  
National Park Service  
U.S. Department of the Interior  
1849 C Street NW  
Washington, DC 20240-0001

## HISTORIC AMERICAN LANDSCAPES SURVEY

MONTROSE PARK TULIP POPLAR  
(Montrose Park *Liriodendron tulipifera*)

HALS No. DC- 10

<u>Location:</u>	Rock Creek Park, Montrose Park, clearing in northwest corner, Washington, District of Columbia
<u>Owner/Manager:</u>	U.S. government, National Park Service
<u>Present Use:</u>	Ornamental and shade tree
<u>Significance:</u>	The Montrose Park Tulip Poplar ( <i>Liriodendron tulipifera</i> ) is significant because of its longevity and picturesque setting. Moreover, due to its large size, the Montrose Park Tulip Poplar is likely amongst the oldest tulip poplars in Washington, D.C., growing since the beginning of the property's long evolution.
<u>Author &amp; Discipline:</u>	Jonathan Pliska, Landscape Architectural Historian, 2006
<u>Project Information:</u>	The Witness Tree Protection Program was a pilot project undertaken by the Historic American Landscapes Survey and the National Capital Region of the National Park Service. The principals involved were Richard O'Connor, Chief, Heritage Documentation Programs; Paul D. Dolinsky, Chief, Historic American Landscapes Survey; Darwina Neal, Chief, Cultural Resources, National Capital Region; Jonathan Pliska, Historian, Historic American Landscapes Survey; Jet Lowe and James Rosenthal, Photographers, Heritage Documentation Programs.

PART I. HISTORICAL INFORMATION<sup>1</sup>

In 1904, Georgetown was home to 30,000 inhabitants and had been taxed since 1871, but this thriving section of Washington, D.C., contained no public parks. As a result, many children were forced to play in the streets. Responding to this need, Sarah Louise Rittenhouse began her campaign to establish a park at the historic, sixteen-acre Montrose Estate. The property occupied land that had belonged to Robert Parrott, an early nineteenth-century ropemaking magnate. Parrott built his mansion house and ropewalk on the estate, and graciously allowed Georgetown residents to use the adjoining land for

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<sup>1</sup> Derived from architrave p.c., architects, Rhodeside & Hartwell, Incorporated, and Robinson & Associates, Inc., *Montrose Park: Cultural Landscape Report* (Washington, D.C.: United States Dept. of the Interior, National Park Service, National Capital Region, Cultural Landscapes Program, August 2004).

picnics and outdoor events. Parrott's Woods, as the property came to be known, was later purchased by William and Mary McEwan Bryce in 1837. The Bryces named the estate Montrose and improved the grounds, constructing outbuildings and carrying out the first major landscape design on the property. By the 1880s, however, the Montrose Estate had begun to decline, and by 1900 the property was in a serious state of disrepair.

As a lifelong community resident, Rittenhouse successfully led a grassroots movement to protect the estate as Georgetown's first public park, fulfilling the role that Parrott's Woods had unofficially served a century before. Although she placed great value on the landscape's inherent beauty, Rittenhouse did not fight for the restoration of the mansion itself. Nevertheless, this "dilapidated old building," as she put it, was restored and maintained as part of Montrose Park, formally created on 9 June 1911, when the federal government finalized purchase of the Montrose Estate. From 1911-30, the park was developed under the guidance of landscape architects George Brunap and Horace Peaslee. The newly formed National Park Service took over management of Montrose Park in 1933, and continues in this capacity today.

Brunap and Peaslee designed Montrose Park along one major division: a naturalistic woodland comprising the northern third of the park with a more formalized landscape treatment to the south. This southern portion contains the mansion house and Parrott's ropewalk was originally located here as well. Brunap and Peaslee designed gardens, paths, small buildings, and even a tennis court for the southern section while largely leaving the northern portion to grow and develop naturally. A massive tulip poplar is located in the western edge of the northern woodland, at the center of a large clearing. This setting grants one of the most picturesque views found within the entire park. Moreover, due to its large size, the Montrose Park Tulip Poplar is likely amongst the oldest trees present on the landscape, growing since the beginning of the property's long evolution.

## PART II. BIOLOGICAL INFORMATION

Within the United States, the native range of the tulip poplar (*Liriodendron tulipifera*) is from Massachusetts to Wisconsin, south to Florida and Mississippi. It was first cultivated in 1663<sup>2</sup> and is one of two species of large, deciduous trees classified under the family Magnoliaceae.<sup>3</sup> *Liriodendron tulipifera* is characterized by its simple, clean-cut, glossy, fiddle-shaped leaves.<sup>4</sup> These leaves emerge in a "flag-like outline," are alternately arranged on the branches, measure approximately 3" to 8" across and long, respectively.

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<sup>2</sup> Also known as the tuliptree, tulip magnolia, yellow poplar, and whitewood; Michael A. Dirr, *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*, 5th edition (Champaign, Ill.: Stipes Publishing L.L.C., 1998), 572, 574.

<sup>3</sup> Liberty Hyde Bailey and Ethyl Hyde Bailey, "Liriodendron," in *Hortus Third: A Concise Dictionary of Plants Cultivated in the United States and Canada*, revised and expanded by the staff of the Liberty Hyde Bailey Hortorium, Cornell University (New York: Macmillan Publishing Co., Inc., 1976), 669.

<sup>4</sup> G. H. Collingwood and Warren D. Brush, *Knowing Your Trees*, ed. Devereux Butcher (Washington, D.C.: The American Forestry Association, 1964), 259.

Three or four acute lobes appear on each side near the rounded or truncate base. The petiole, the stem that attaches the leaf to the branch, is from 2" to 4" long. Leaves are typically green to bright green during the summer and a spectacular yellow or golden yellow in the fall, before falling in October or early November. Perfect flowers measuring 2" to 3" high x 1 ½" to 2 ½" wide bloom from May to early June. These flowers resemble large tulips, and are comprised of six greenish yellow petals in two rows and three relaxed sepals. Each flower's corolla, the inner envelope of floral leaves, contains a distinctive orange color.<sup>5</sup> The large flowers develop into dry cone-like fruits measuring approximately 3" long. These fruits remain in the tree after the leaves drop and disperse winged seeds, which fall and twirl to the ground.<sup>6</sup> In the winter, reddish-brown buds resembling a duck's bill are visible. The blunt terminal buds are particularly conspicuous and measure about ½" long. Lateral buds are similar in appearance but considerably smaller.<sup>7</sup> The grayish brown bark is easily recognizable in a deciduous forest community by its furrowed character and interlaced, rounded ridges that are separated by grayish crevices.<sup>8</sup> When growing in the open, *Liriodendron tulipifera* specimens develop a somewhat pyramidal habit in youth before maturing to an oval-rounded appearance. In dense conditions the tree is often free of branches for 70-80 percent of its total height.<sup>9</sup>

*Liriodendron tulipifera* enjoys a fast growth rate, often 15' to 20' over a six to eight year period.<sup>10</sup> Trees typically reach 80' to 100' in height, with crown spreads from 30' to 50'. The trunk of a particularly large specimen may reach a diameter at breast height (d.b.h.) of 8' to 10'; slightly smaller sizes are significantly more common.<sup>11</sup> As of 2 November 2006, the Montrose Park Tulip Poplar is the second largest tree known to exist in Washington, D.C. It measures an impressive 96' tall with a 120' crown spread and 223" trunk circumference, garnering a total of 350 tree points.<sup>12</sup> The tree appears all the more massive as it is planted in a clearing with no appreciable vegetation or other obstacles around it. In general, *Liriodendron tulipifera* typically reaches reproductive maturity

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<sup>5</sup> Dirr, 572-73.

<sup>6</sup> Collingwood and Brush, 259.

<sup>7</sup> Ibid.; Dirr, 572.

<sup>8</sup> Dirr, 573.

<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

<sup>11</sup> Edward F. Gilman and Dennis G. Watson, *Liriodendron tulipifera: Tuliptree* (Gainesville, Fla.: University of Florida, Institute of Food and Agricultural Sciences, November 1993), <http://edis.ifas.ufl.edu/ST363> (accessed 12 June 2006).

<sup>12</sup> Tree points are calculated using the following equation developed by the nonprofit conservation organization American Forests, which maintains the National Register of Big Trees: Tree points = circumference (inches) + tree height (feet) + ¼ crown spread (feet). The largest tree in Washington, D.C., a white oak (*Quercus alba*) earned a total of 356 points, only six more than the Montrose Park Tulip Poplar. Measurements were conducted by the Casey Trees Endowment Fund. For more information, see American Forests, "National Register of Big Trees," *American Forests* (Washington, D.C.: American Forests, 2006), <http://www.americanforests.org/resources/bigtrees> (accessed 7 September 2006); Casey Trees Endowment Fund, "Largest Trees by Selected Species in Washington D.C.," *Casey Trees Endowment Fund* (Washington, D.C.: Casey Trees Endowment Fund, 2 November 2006), <http://www.caseytrees.org/pdfs/BigTrees.pdf> (accessed 13 November 2006).

within fifteen to twenty years and may produce seeds for the next 200 years.<sup>13</sup> Age at natural death is usually 200 to 250 years, but individual trees may reach 300 years. Although the age of the Montrose Park Tulip Poplar is not known, given its immense size it most likely dates to at least the early nineteenth century.

*Liriodendron tulipifera* is well adapted for use as a shade tree, and is used in residential and commercial lots or as a street tree. However, due to its large size, it requires a 10' to 15' setback and is not typically planted near other trees. The species prefers moist, well-drained, acidic soils composed of clay, sand, or loam. Although it requires full sun, it is only moderately drought tolerant; drought conditions usually cause premature defoliation. *Liriodendron tulipifera* exhibits no tolerance to aerosol salts, but is considered resistant to most pests and diseases. Scales and aphids, particularly tuliptree aphids (*Illinoia liriodendri*), can build up in large numbers and leave behind honeydew, a sticky sugar-containing substance that often fosters the growth of a black, sooty mold. While generally not harmful, the mold is unattractive. Trees are also attacked by several diseases, including cankers, leaf spots, and mildew, causing discoloration and minor dieback but posing little threat to overall health. Verticillium wilt is a somewhat greater problem, as it causes the wilting and death of leaves on affected branches, and any extremely serious, widespread infection may easily kill the tree.<sup>14</sup> The Montrose Park Tulip Poplar is presently in good condition, and free from significant pest infestation or disease.

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<sup>13</sup> Donald E. Beck, "Yellow Poplar," in *Silvics of North America Volume 2: Hardwoods. Agricultural Handbook 654*, online ed., tech. coords. Russell M. Burns and Barbara H. Honkala (Washington, D.C.: U.S. Dept. of Agriculture, U.S. Forest Service, 1990), 801, 805, 810, [http://www.na.fs.fed.us/spfo/pubs/silvics\\_manual/volume\\_2/silvics\\_v2.pdf](http://www.na.fs.fed.us/spfo/pubs/silvics_manual/volume_2/silvics_v2.pdf) (accessed 13 June 2006).

<sup>14</sup> Gilman and Watson.